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ABSTRACT

This study involved the development and testing of a scale to assess the attitude of a student towards his student teaching experience. A four-state survey of teacher training institutions showed that no standardized instrument existed, although college coordinators were willing to use one. Items for the scale were generated by using a model including two institutions responsible for the student teaching experience, four psychological needs (for achievement, independence, self-esteem, and social approval) and 18 aspects of a student teaching experience. Development and testing involved 12 stages: 1) definition of concepts; 2) construction of 144 scale items; 3) classification of items according to need; 4) classification on favorableness-unfavorableness scale; 5) determination of reliability of (3) and (4); 6) selection of items for preliminary scale; 7) administration of scale to pilot group; 8) selection of items for final scale; 9) establishment of split-halves of final scale; 10) administration of final 50-item scale; 11) completion of scale by eight supervisors; 12) analysis of responses. The supervisors' and students' scores both showed that the majority of students were favorable to the student teaching experience. The internal validity of the scale seemed satisfactory, it was easy to administer and score, and took about 20 minutes to complete. It seems to be a reliable measure and may prove serviceable in helping to evaluate student teaching programs. (MBM)

THE DEVELOPMENT OF A SCALE FOR ASSESSING THE  
ATTITUDE OF A STUDENT TOWARD HIS  
STUDENT TEACHING EXPERIENCE

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by

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INTRODUCTION

Statement of the Problem

The essential problem was to develop a usable instrument for assessing the attitude of a student toward his student teaching experience. The correlative problem was to employ the instrument to determine: individuals' attitudes toward their student teaching experiences as a function of their responses to the scale items; the extent of agreement between the college supervisor's perception of student teachers' attitudes and the students' attitudes toward their student teaching experiences as a function of sets of summated scores based on responses to the scale items.

Rationale

Traditionally, the student teaching experience has been assumed to be essential for teacher preparation.<sup>1,2</sup> Though alternatives to teacher preparation have been suggested,<sup>3</sup> the study was conducted on the premise that student teaching would continue to be an important facet of preparation in the immediate future.

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It was accepted that the basic purpose of the student teaching experience was the enhancement of readiness for competent entry into full-time instructional responsibility. However, it was postulated that professional educators responsible for student teachers could assume neither that a particular experience achieved the stated purpose, nor that the results of a particular student teacher's experience were all, or even generally, positive.

In a partial analysis of the politics of school-college cooperation in student teaching, Hetenyi discussed the power base of the student teacher, supervising teachers, school administration, school districts, universities, and colleges. He took the position that:

A student teacher's development is critically determined by the quality of the student teaching experience, by the skills and attitudes of the supervising teacher, by the atmosphere of the school, and by the competence of the college supervisory staff. At the same time, the student teacher has very little power to safeguard his interest . . . in student teaching, therefore, the most vitally affected party has the least effective power to change the situation.<sup>4</sup>

A survey of 44 teacher training institutions in four north-western states indicated a relative absence of the practice of assessing the attitude of a student toward his student teaching experience. Representatives of 43 schools responded to the questionnaire. Respondents indicated that 7 schools made a "normal practice" of assessing the attitude of a student toward his student teaching experience. There was no indication that a standardized instrument was used for such assessment by any school. The study indicated a general willingness on the part of college coordinators of student teaching programs to consider the use of a new instrument for such an assessment, if the instrument were valid, reliable, and convenient.<sup>5</sup>

The study was undertaken with the convictions that: there should be more extensive evaluation of a student teaching experience; such evaluation should include student reaction to that experience; more extensive evaluation of student teaching experiences could contribute to an increased understanding of individuals' experiences, to providing more effective student teaching experiences, and to the solution of certain pre-service and professional problems; a scientifically developed instrument for relevant attitude assessment would be a contribution to the necessary evaluation procedures.

#### Theory Underlying the Proposed Instrument

The attitude of a student toward his student teaching experience was considered a function of the extent to which the experience fulfilled the needs for achievement, independence, self-esteem, and social approval.

The thinking of selected psychologists and educators was basic to the need aspect of the underlying theory.

The following seemed to be legitimate conclusions from the literature cited: (1) needs were basic to human motivation and behavior, and to understanding and explaining same, (2) the satisfaction of needs was essential not only to the fuller actualization of self, but more basically to the very maintenance of conditions necessary to sustain a satisfying level of psychological functioning, (3) since needs were significant both to the reality and to the explanation of human motivation and behavior, and since attitudes were seen as products of the individual's encounter with environment, it was plausible to attempt to assess the

attitude of a student toward his student teaching experience in terms of need fulfillment.

When considering needs with reference to a student teaching experience, the writer made the assumption that concern could be limited to psychogenic needs and that certain needs stated by some authors were too generic for inclusion in the model, as for example the needs for security, adequacy, and competency.

In addition to the above, the following four procedures assisted in the selection of needs for the instrument. Comparison: the writer examined several statements of human needs and noted commonalities (Maslow, Murray, Coleman, Cronbach, and Bernard). Exclusion: physiological, love, and safety needs were not seen as vital in assessing an attitude toward a student teaching experience. Exclusiveness: one problem in identifying and selecting needs was their apparent interrelationships. The writer thought that he perceived sufficient distinction between the needs for achievement, independence, self-esteem, and social approval to make possible the initial attempt of writing items specifically related to each. Inference: the purpose and nature of the student teaching experience, as well as the professional goals of student teachers, suggested that the needs for achievement, independence, self-esteem, and social approval were significant.

It was also theorized that it should be possible to assess the attitude of a student toward his student teaching experience by having the student respond to statements generated by interrelating responsible institutions, needs, and specified components of a student teaching experience. Further, that by using statements relating to the distinguishable, as well as to the indistinguishable involvement of



the school and the college in the student teaching experience, it should be possible to get an expression of attitude toward the involvement of each as well as an expression of attitude toward the student teaching experience. The writer established, as the basis for generating scale statements, a model involving two responsible institutions, four psychological needs, and 18 psychological objects, components of a student teaching experience. The specified responsible institutions were the school and the college through which the student teaching was done. The stated components of the student teaching experience resulted from the writer's attempt to delineate psychological objects in such an experience. (See Theoretical Model, p. 6.)

#### General Questions

The following questions were essential to the study:

1. Can a convenient, reliable, and valid scale be developed to assess the attitude of a student toward his student teaching experience, following that experience?
2. Can the scale be used to gain an insight into the student's attitude toward the school and college involvement in the student teaching experience?
3. Is it possible to establish distinct factors corresponding to the four needs used in the model?
4. Using responses to the scale statements as the basis, how well do the college supervisors of student teachers perceive the attitudes of the students toward their student teaching experiences?

### Theoretical Model

- I. Construct: attitude toward student teaching experience
- II. Subjects: college students following their student teaching experience
- III. Model for item development:

#### INSTITUTIONAL INVOLVEMENT (School and College):

Distinguishable involvement (school and college categories):

Psychological objects 1, 4, 10, 12, 15, 16, 18

Nondistinguishable involvement (mutual category):

Psychological objects 2, 3, 5, 6, 7, 8, 9, 11, 13, 14, 17

#### PSYCHOLOGICAL NEEDS:

- M = need for achievement
- X = need for independence
- Y = need for self-esteem
- Z = need for social approval

#### PSYCHOLOGICAL OBJECTIVES:

- 1. Orientation
- 2. Observation
- 3. Placement
- 4. Demands
- 5. Materials
- 6. Facilities
- 7. Transition into instructional responsibility
- 8. Pupils
- 9. Diversity of experience
- 10. Time involvement
- 11. Outcomes
- 12. Regulations
- 13. Course structure
- 14. Inherited situation
- 15. Perceived personal status
- 16. Intercommunication
- 17. Schedule
- 18. Supervisors

## DEVELOPMENT AND TESTING PROCEDURES

After structuring the model, development and testing of the scale involved 12 stages: (1) definition of concepts essential to the instrument, (2) construction of 144 scale items, (3) classification of the 144 items according to need categories by five judges, (4) classification of the 144 items on a Thurstone-type seven-point favorableness-unfavorableness scale by 13 judges, (5) determining the reliability of the judging, (6) selection of items for a preliminary Likert-type scale, (7) administration of the Likert-type 106-item scale to the pilot group (N = 87), (8) selection of items for the final scale, (9) establishing split-halves of the final scale, (10) administration of the final 50-item scale to the population (N = 87), (11) completion of a scale by each of eight college student teaching supervisors for each of five of his student teachers, and (12) analysis of students' and supervisors' responses.

### Development of Items

The model served as the basis for developing the initial 144 statements. The responsible institutions, school and college, were perceived by the investigator as having distinguishable involvement with reference to seven of the psychological objects. Items developed with regard to those objects involved interrelating the institutions, needs, and objects. For example, "The college supervisor offers criticism without hurting the student teacher's self-esteem," involved interrelating the college, the psychological need for self-esteem, and the psychological object, supervisor. The item was intended to elicit the student teacher's



reaction to a college-involved psychological object as it related to his need for self-esteem. Again, "'Freedom to teach' is a joke when working under the school regulations," involved interrelating the school, the psychological need for independence, and the psychological object, regulations. The item was intended to elicit the student teacher's reaction to a school-involved psychological object as it related to his need for independence. This procedure of item development resulted in 56 statements which constituted the items for the school and college categories.

Such distinguishable involvement was not perceived by the writer with reference to the remaining 11 psychological objects. Thus, the items written with regard to those objects involved interrelating only the needs and objects. For example, "Classroom observation(s) provided during student teaching helps prepare one to handle classroom responsibilities," involved interrelating the psychological need for achievement and the psychological object, observation. It was accepted by the investigator that the provision of observation opportunities involved neither the school nor the college alone, but rather both institutions. The item was intended to get at the student teacher's reaction to a mutually-involved (school and college) psychological object as it related to his need for achievement. For the mutual category 38 statements were written.

#### Categorizing Items According to Needs

These statements were given to five faculty members of the Education Department of Washington State University who were asked to categorize the statements according to the need categories established

by the writer. The judges were given five options for categorizing each item. The item could be placed in one of the four defined need categories or in a fifth category described, "not able to categorize." After the initial categorizing, most of the ambiguous items were rewritten and were categorized again by the same judges. The judgments provided supportive evidence for the content validity of the items. All five judges agreed with the writer's categorization of 75 items, and four judges agreed on 45 additional items. On only 24 of the 144 items was there less than 80 percent agreement between judges and writer.

### Scaling of Items

The 144 statements were then given to 18 teachers, six each from the elementary, junior high school, and high school levels, for scaling.

Each judge classified every statement on a seven-point Thurstone-type scale in terms of the degree of favorableness of reaction to the student teaching experiences he deemed the item represented. On the basis of the judging the S (median) and the Q (interquartile range) values of each item were determined. The former statistic was used to locate the item on the seven-point favorableness scale. The latter statistic was used as an index of ambiguity with a value of 1.4 generally used as the largest acceptable value.

### Determining Reliability of Judging

Although the Q value was an index of consistency of judging with reference to the individual item, measures of reliability were obtained for assigned S and Q values. The 18 judges were randomly assigned to one

of two groups (A and B), each of which was made up of three judges from each of the three educational levels described above. The product-moment coefficient of correlation was used to correlate  $S_A$  and  $S_B$  as well as  $Q_A$  and  $Q_B$  across all items. The coefficient of correlation for S values was .986 and the correlation of .308 was calculated for Q values. The Spearman-Brown formula yielded a reliability coefficient of .993 for S values and of .471 for Q values.

### Item Selection

When selecting items for the preliminary Likert-type scale (which was to be administered to the pilot group), the following were the general guidelines for the investigator: (1) eliminate items with Q (interquartile range) values in excess of 1.4, (2) retain a balance of items in terms of S (median) values, and (3) retain balance within the categories of needs, institutional involvement and psychological objects. Of the 144 statements 16 had Q values in excess of 1.4. To help retain the desired balance, two items with 1.5 value and one item with 1.6 value were retained. The selection process resulted in the elimination of 38 items, about 26 percent of the original statements.

### Administration of the Preliminary Scale to the Pilot Group

The preliminary scale of 106 items was responded to by 87 members of the pilot group in November, 1968. This group had just completed student teaching through Washington State University.

### Deriving Summated Scores

Each item was keyed in terms of its defined need, psychological object, institutional category, and directionality (positive or negative). These were given the computer as "input categories." Then each subject's response to every item was scored and treated as "input data." On the basis of the input data eight summated scores were derived for each individual -- one for each of the four need categories, one for each of the three institutional involvement categories (school, college, and mutual), and one for the responses to all 106 items.

### Intercorrelations of Summated Scores

Intercorrelations among all eight summated scores were calculated for the total group of 87 subjects, and for men and women respectively. Neither Fisher's  $\bar{z}$  test of the difference between uncorrelated coefficients of correlations, nor Fisher's  $t$  test of a difference between uncorrelated means, indicated sex difference significant at the .01 level.

Intercorrelations among the need categories based on the summated scores of the total group are listed in Table 1. The intercorrelations indicated that one common factor accounted for such intercorrelations. Consequently, the originally hypothesized distinct need categories were ignored in the further development of the scale.

In Table 2 are presented the intercorrelations among the school, college, and mutual categories based on the summated scores of the entire group. The college category did not correlate as highly with the school and mutual categories as did the latter two between themselves. The three categories -- school, college, mutual -- were treated as distinct in the further development of the scale.

TABLE 1

INTERCORRELATIONS AMONG NEED CATEGORIES BASED ON THE SUMMATED SCORES  
OF THE PILOT GROUP (N = 87)

CATEGORY	ACHIEVEMENT	INDEPENDENCE	SELF-ESTEEM	SOCIAL APPROVAL
Achievement	1.00	0.80	0.86	0.84
Independence	0.80	1.00	0.81	0.72
Self-esteem	0.86	0.81	1.00	0.81
Social approval	0.84	0.72	0.81	1.00

TABLE 2

INTERCORRELATIONS AMONG CATEGORIES OF INSTITUTIONAL INVOLVEMENT BASED  
ON THE SUMMATED SCORES OF THE PILOT GROUP (N = 87)

CATEGORY	SCHOOL	COLLEGE	MUTUAL
School	1.00	0.49	0.84
College	0.49	1.00	0.48
Mutual	0.84	0.48	1.00

Intercorrelations of Items  
with Summated Scores

The score on a single item could vary over a six-point scale. Scores on the individual items for each of the 87 subjects were correlated with the subjects' summated scores for each of the four need categories, the three institutional involvement categories, and the total preliminary scale by means of the product-moment correlation coefficient. Correlations between individual items and the institutional summated scores were examined to verify empirically the a priori placement of items. There



was no reclassification of items. The use made of the individual item correlations will be stated in the following section dealing with final item selection.

### Formulation of Final Scale

#### Final Item Selection

An attempt was made to retain three clusters of items in accord with the school, college, and mutual categories. Also, there was concern for equally representing each psychological object included under each category. Therefore the basic determinant in the selection or rejection of items relative to a particular psychological object was the items' correlations with their own and the other two institutional involvement categories. Three coefficients of determination were computed for each item included under a psychological object. Generally selection was made favoring items with the largest difference between the coefficient of determination appropriate to the particular institutional involvement category and the two other such coefficients. Some exceptions to the general procedure occurred because the investigator also sought to maintain a balance of items in terms of S (median) values. This resulted in selecting 12 items with S values in the interval 1.0 to 1.9, 14 items with values in the interval 2.0 to 2.9, 11 items with S values in the interval 5.0 to 5.9, and 13 items with values in the interval 6.0 to 6.9. Thus, in the formulation of the final scale 56 items were dropped from the preliminary scale administered to the pilot group. On the bases of the above, 50 items were selected for the final scale.

### Establishing Split-halves of the Final Scale

The correlation coefficients of selected items with the summated scores in their own categories, and their S and Q values, were used to determine the split-halves (A and B) of the final scale. For "A" and "B" respectively the mean S values were 3.76 and 3.78; the mean Q values were .94 and .99. The correlation coefficients for "A" ranged from .31 to .67 with a median value of .46. The correlation coefficients of "B" ranged from .26 to .66 with a median value of .49. The split-halves were to be used later for determining reliability of the final scale on the population.

### Testing the Final Scale

The 50-item final scale was tested on 87 students who returned to Washington State University from student teaching in February, 1969. That 87 students made up both the pilot group and the population for the final testing was coincidental.

### Procedures to Assist Analysis of Scale and Population Performance

On the basis of the students' responses, four summated scores were derived for each individual: one for each of the three institutional involvement categories, and one for responses to all scale statements. Summated scores were determined to: (1) check item correlations with the three categories and total scores, (2) provide tables of intercorrelations among the categories and total scores, (3) derive for each individual a total score as well as scores for

each of the three categories, (4) provide a basis for determining norms, (5) indicate the central tendency and variability of the total group performance, and (6) serve as a basis for correlating students' responses with those of the college supervisors to be described later. Using product-moment coefficients of correlation, each item across all subjects was correlated with each of the summated scores across all subjects. Also, intercorrelations among the institutional involvement categories and the total scores were determined. Correlation coefficients and intercorrelations were computed to: (1) recheck the relatedness of each item to its respective category, (2) further analyze the distinctness of the institutional involvement categories, and (3) further examine the matter of possible sex differences. The testing of sex difference essentially confirmed the earlier results determined on the basis of the pilot group's performance.

#### Analysis of Population Data

The intercorrelations among the school, college, and mutual categories based on the summated scores of the total group are presented in Table 3. The correlations between mutual and school, school and total, and mutual and total summated scores represented much higher percentages of variances in the sets of scores than did the correlations between college and the school, mutual, and total summated scores. The results agreed with those of the pilot study, in that the institutional categories, though not completely independent, were somewhat different variables.

TABLE 3

INTERCORRELATIONS AMONG CATEGORIES OF INSTITUTIONAL  
INVOLVEMENT AND TOTAL SCORES BASED ON THE  
SUMMATED SCORES OF THE TOTAL POPULATION (N = 87)

CATEGORY	SCHOOL	COLLEGE	MUTUAL	TOTAL
School	1.00	0.32	0.82	0.88
College	0.32	1.00	0.32	0.60
Mutual	0.82	0.32	1.00	0.93
Total	0.88	0.60	0.93	1.00

Spearman-Brown reliability coefficients were determined for the total scale, and for the school, college, and mutual categories separately. The coefficients are shown in Table 4.

TABLE 4

SPEARMAN-BROWN RELIABILITY COEFFICIENTS FOR THE TOTAL SCALE, AND FOR  
SCHOOL, COLLEGE, AND MUTUAL CATEGORIES BASED ON ODD-EVEN  
SUMMATED SCORES OF THE TOTAL POPULATION (N = 87)

CLASSIFICATION	RELIABILITY COEFFICIENT
School category	.831
College category	.786
Mutual category	.883
Total scale	.926

Based on the summated scores of the total population, measures of central tendency and variability were computed for the school, college, and mutual categories, and for the total scale. The population's mean

item scores suggested that the students were in general favorable toward their student teaching experience.

The total raw scores and the mean item scores for the 87 subjects, based on their responses to the 14 items in the school category, were determined. The highest attained score was 82 out of a possible 84. The minimum possible score was 14, but the lowest attained score was 49. The mean item scores ranged from 3.5 to 5.86 with 82 subjects having mean item scores of 4.0 and above. The mean item scores suggested that the students' attitudes toward the school involvement in the student teaching experience ranged from neutral to very favorable.

The total raw scores and the mean item scores for the 87 subjects, based on their responses to the 14 items in the college category, were determined. The highest attained score was 79 out of a possible 84. The minimum possible score was 14, but the lowest attained score was 41. The mean item scores ranged from 2.93 to 5.64 with 76 subjects having mean item scores of 4.0 and above. The mean item scores suggested that the students' attitudes toward the college involvement in the student teaching experience ranged from mildly unfavorable to very favorable.

The total raw scores and the mean item scores for the 87 subjects, based on their responses to the 22 item mutual category, were determined. The highest attained score was 127 out of a possible 132. The minimum possible score was 22, but the lowest attained score was 60. The mean item scores ranged from 2.73 to 5.77 with 77 subjects having mean item scores of 4.0 and above. The mean item scores suggested that the students' attitudes toward mutual involvement objects ranged from mildly unfavorable to very favorable.



The total raw scores and the mean item scores for the 87 subjects, based on their responses to the 50 items in the total scale, were determined. The highest attained score was 273 out of a possible 300. The minimum possible score was 50, but the lowest attained score was 155. The mean item scores ranged from 3.10 to 5.46 with 81 subjects having mean item scores of 4.0 and above. The mean item scores suggested that the students' attitudes toward their student teaching experiences ranged from mildly unfavorable to very favorable.

The frequencies and range of responses to each item in each of the three categories were determined. For analytical purposes responses scored one through three were considered unfavorable, and responses scored four through six were considered favorable.

The evidence provided by examining the frequencies of responses to the individual items indicated the general positive attitude of the students toward their student teaching experience. It indicated also, some aspects of the student teaching experiences that could be looked at by those in charge of such experiences.

#### Eliciting Perceptions of College Supervisors

Each of the Washington State University student teacher supervisors had at least eight students represented in the population. Five names were randomly selected from the list of students associated with each supervisor. Five copies of the final scale, each bearing the name of the selected student teacher, plus directions to guide responding, were sent to each supervisor. The supervisor was to respond to the scale statements as he perceived that the identified student would

respond. Responses given by the supervisors were scored, and four summated scores, representing each of the three institutional involvement categories and responses to all the scale statements, were determined for each student teacher.

#### Procedures to Assist Analysis of Responses

Two sets of four summated scores based on students' and supervisors' responses to the items in the school, college, and mutual categories and to all items in the scale were established. These were examined to determine patterns of responding, the favorableness of students' attitudes as perceived by the supervisors, large differences in pairs of scores across the categories and the total scale, and rank-difference correlations.

#### Analysis of Supervisory Data

Inspection indicated that supervisors A, E, and F tended to underestimate the positiveness of students' attitudes. Comparing 20 pairs of scores (five for each of the three categories and five for the total scale for each supervisor and his five student teachers), the total scores of supervisors A, E, and F were lower than their students' total scores in 17, 18, and 19 instances respectively. Supervisors C and G showed slight tendencies to overestimate, as 14 and 15 summated scores respectively were higher than those of their students.

Further examination suggested that in general the supervisors perceived the students as having favorable attitudes toward their student teaching experiences. The supervisors assigned total raw scores having

mean item scores less than four to only one, five, three, and three students in the school, college, and mutual categories, and in the entire scale, respectively.

Differences were considered large when they exceeded the number of items in the school, college, or mutual categories, or in the entire scale (14, 14, 22, and 50, respectively). There were 14 large differences between supervisors' and students' summated scores. Five large differences existed in each of the school and mutual categories, and two large differences existed in the college category and in the total summated scores. Of these 14 differences, 12 involved under-estimation of students' expressed attitudes, and 10 involved supervisors A and F.

On the basis of the two sets of four summated scores, the Spearman rank-difference correlations given in Table 5 were calculated. Seven correlations under both the school and mutual categories were positive. Three of the correlations under the college category were positive. Six correlations in the total scale column were positive.

TABLE 5

SPEARMAN RANK-DIFFERENCE CORRELATION COEFFICIENTS BASED ON EIGHT GROUPS OF FIVE PAIRS OF STUDENTS' AND SUPERVISORS' SUMMATED SCORES FOR THE SCHOOL, COLLEGE, AND MUTUAL CATEGORIES, AND FOR THE TOTAL SCALE

SUPERVISOR	SCHOOL	COLLEGE	CORRELATIONS MUTUAL	TOTAL SCALE
A	.90	.07	.70	.90
B	.70	.00	.60	.50
C	.77	-.23	-.08	.20
D	.30	.92	.30	.32
E	.17	-.23	.57	.67
F	.07	-.93	.10	-.40
G	-.33	-.08	.17	-.10
H	1.00	.17	.37	.30

Examination of the rank-difference correlations based on summated scores of supervisors and students suggested that the college supervisors better perceived the students' responses to school and mutual items than the students' responses to college items. However, there was insufficient evidence to substantiate any firm conclusions regarding the agreement between the college supervisor's perception of the student teachers' attitudes and the student teachers' expressed attitudes toward their student teaching experiences.

### SUMMARY

This study involved the development and testing of a scale to assess the attitude of a student toward his student teaching experience.

A four-state survey of teacher training institutions, carried out by the investigator, revealed that it was not common practice to assess the attitudes of a student toward his student teaching experience. The survey did not report a single standardized instrument designed for such an assessment. However, it revealed a general willingness on the part of college student teaching coordinators to consider use of such an instrument if it were valid, reliable, and convenient.

Items for the scale were generated by employing a model which included two institutions responsible for the student teaching experience, four psychological needs, and 18 aspects of a student teaching experience.

The investigator theorized that the attitude of a student toward his student teaching experience was a function of the extent to which the experience fulfilled the needs for achievement, independence, self-esteem, and social approval. Results of the pilot study indicated that the intercorrelations among the need categories were such that they were accounted for by one common factor.

Development and testing of the scale involved 12 stages:

- (1) definitions of concepts essential to the instrument, (2) construction of 144 scale items, (3) classification of the 144 items according to need categories by five judges, (4) classification of the 144 items on a Thurstone-type seven-point favorableness-unfavorableness scale by 18 judges, (5) determining the reliability of the judging, (6) selection of items for a preliminary Likert-type scale, (7) administration of the Likert-type 106-item scale to the pilot group ( $N = 87$ ), (8) selection of items for the final scale, (9) establishing split-halves of the final



scale, (10) administration of the final 50-item scale to the population ( $N = 87$ ), (11) completion of a scale by each of eight college student teaching supervisors for each of five of his student teachers, (12) analysis of students' and supervisors' responses.

The Spearman-Brown reliability coefficient for the total scale was .926. The attitude scale contained three distinguishable sub-scales corresponding to the school, college, and mutual categories.

Examination of the data suggested that the college supervisors were better able to perceive students' attitudes toward the school than toward the college involvement in the student teaching experience. However, there was insufficient evidence to substantiate any firm conclusion regarding the agreement between the college supervisor's perception of the student teachers' attitudes and the student teachers' expressed attitudes toward their student teaching experiences. With few exceptions, the supervisors' summated scores suggested that they perceived the students' attitudes as favorable toward the school and college involvement in the student teaching experience, and toward the student teaching experience. The students' mean item scores for the school, college, and mutual categories and for the entire scale indicated that with but few exceptions the student population had favorable attitudes toward the school and college involvement in the student teaching experience, and toward the student teaching experience.

The internal validity of the scale seemed satisfactory. The validity against an external criterion was not established. The instrument was easy to administer and score, and took about twenty minutes to complete. As developed, the scale would seem to be a reliable measure of attitude toward one's student teaching experience, and might prove serviceable for helping evaluate student teaching programs.

Footnote References

<sup>1</sup>James B. Conant, The Education of American Teachers (New York: McGraw-Hill, 1963), p. 142.

<sup>2</sup>American Association of Colleges for Teacher Education, Evaluative Criteria for Accrediting Teacher Education (Washington, D.C.: American Association of Colleges for Teacher Education, 1967), p. 116.

<sup>3</sup>Kimball Wiles, et al., "Teacher Education and the University," Changing Dimensions in Teacher Education, Twentieth Yearbook of the Association of Colleges for Teacher Education (Washington, D.C.: American Association of Colleges for Teacher Education, 1967), p. 69.

<sup>4</sup>Laszlo Hetenyi, "The Politics of School-College Cooperation in Student Teaching," in Partnership in Teacher Education, ed. by E.B. Smith, et al. (Washington, D.C.: American Association of Colleges for Teacher Education, 1968), p. 106.

<sup>5</sup>John E. Whooley, "The Development of a Scale for Assessing the Attitude of a Student Toward His Student Teaching Experience." Unpublished Ed.D. dissertation, Washington State University, 1969.